

AMENDMENTS TO THE SPECIFICATION:

Please add the following new paragraph immediately following the title appearing on page 1:

This disclosure is based upon European Application No. 02406150.9 filed December 30, 2002, and International Application No. PCT/IB2003/006141, filed December 17, 2003, the contents of which are incorporated by reference.

Please add the following heading at page 1, line 4:

BACKGROUND OF THE INVENTION

Page 2, before line 1, please add the following heading:

SUMMARY OF THE INVENTION

Page 2, please replace the paragraph at lines 4-5 with the following amended paragraph:

The method according the invention ~~is defined in claim 1. In the dependent claims various embodiments are proposed~~ exploits the temporal redundancy between successive frames in a video sequence. A reference frame, called an I-frame, is first approximated by a collection of basis functions, called atoms. Either the atoms are quantized, entropy coded and sent to a decoder, or the original I-frame is encoded and transmitted to the decoder using any frame codec. Subsequent predicted frames, called P-frames, are approximated by the geometric transformations of the basis functions (atoms) describing the previous frame. The parameters of the geometric transformation are quantized, entropy coded and sent to a decoder in order to reconstruct the predicted frames.

Please add the following heading at page 2, line 6:

BRIEF DESCRIPTION OF THE DRAWINGS

Please add the following heading at page 3, before line 1:

DETAILED DESCRIPTION

Please replace the paragraph beginning on page 3, line 25 and ending on page 4, line 3 with the following amended paragraph:

Translations, anisotropic dilations and rotations:

$$\cancel{g_\gamma(x, y)} = g(x_n, y_n)$$

$$\underline{g_\gamma(x, y) = \frac{1}{\sqrt{a_1 a_2}} g(x_n, y_n)}, \text{ where } \begin{aligned} x_n &= \frac{\cos \vartheta (x - b_1) - \sin \vartheta (y - b_2)}{a_1} \\ y_n &= \frac{\sin \vartheta (x - b_1) + \cos \vartheta (y - b_2)}{a_2} \end{aligned}$$

and $\gamma = [a_1, a_2, b_1, b_2, \vartheta]$, are the parameters of this transformation.

Please replace the paragraph beginning on page 4, line 4 and ending on page 4, line 7 with the following amended paragraph:

Generating mother functions are chosen almost arbitrarily. Their properties can be adapted to the specific application. A possible example is to select an oscillating function of the form:

$$\cancel{g(x, y) = (1 - x^2) \exp\left(\frac{x^2 + y^2}{2}\right)}$$

$$\underline{g(x, y) = (1 - x^2) \exp\left(-\frac{x^2 + y^2}{2}\right)}$$